

National 5 Homework

Algebraic Skills

Completing the Square

1. Express $x^2 - 4x + 8$ in the form $(x - a)^2 + b$.
2. Express $x^2 - 12x - 16$ in the form $(x - a)^2 + b$ and state clearly the values of a and b .
3. Expand $(x + 3)(x - 5)$ then write the trinomial in the form $(x - a)^2 + b$.
4. If $(x + 7)(x + 2) = (x + a)^2 + b$, work out the values of a and b .
5. Express $x^2 + 2x - 8$ in the form $(x + a)^2 + b$, and state the values of a and b .
6. Expand $(x - 6)(x + 2)$ and write in the form $(x - a)^2 + b$.
7. Express $x^2 - 12x - 6$ in the form $(x - a)^2 + b$, and state clearly the values of a and b .
8. Show that $(x + 8)(x - 2) = (x + 3)^2 - 25$.
9. Express $x^2 - 10x + 6$ in the form $(x - a)^2 + b$.
10. Expand $(x + 7)(x - 9)$ and write in the form $(x - a)^2 + b$.